



65340.ST25

#4

SEQUENCE LISTING

<110> Conaty, Jason Francis
Hendry, Philip
Lockett, Trevor John

<120> MINIRIBOZYMES ACTIVE AT LOW MAGNESIUM ION CONCENTRATIONS

<130> 65340

<140> 65340

<141> 2001-06-22

<160> 74

<170> PatentIn version 3.1

<210> 1

<211> 15

<212> RNA

<213> Artificial Sequence

<220>

<223> ribozyme

<220>

<221> misc_feature

<222> (8)..(9)

<223> n = c, g, a, u/t

<220>

<221> misc_feature

<222> (10)..(11)

<223> h = c, a, u/t

<400> 1

cugagagnnh hcgaa

15

<210> 2

<211> 16

<212> RNA

<213> Artificial Sequence

<220>

<223> ribozyme

<220>

<221> misc_feature

<222> (9)..(9)

<223> n = c, g, a, u/t

<220>

<221> misc_feature

<222> (8)..(8)

<223> h = c, a, u/t

<220>

<221> misc_feature

<222> (10)..(12)

<223> h = c, a, u/t

<400> 2

cugagaghn hhcga

16

<210> 3

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> N18gOT65mer (T3 promoter)

<220>

<221> misc_feature

<222> (19)..(36)

<223> n = c, g, a, t

<400> 3

ctcggtaccg ttgatcctnn nnnnnnnnnn nnnnnnttgc attgggcctt tagtgagggt

60

taatt

65

<210> 4

<211> 29
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> IL2bioS29mer (cleavage substrate)

<400> 4
 cucgguaccg ugauccugu cuugcauaa
 29

<210> 5
 <211> 66
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> N4gOT66mer (T7 promoter)

<220>
 <221> misc_feature
 <222> (25)..(28)
 <223> n = c, g, a, t

<400> 5
 ctcggtaccg ttgatcctgt ttcgnnnnct catcagttgc attgggcccct atagtgattc
 60

gtatta
 66

<210> 6
 <211> 69
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> N5gOT 67-mer (T7 promoter)

<220>
 <221> misc_feature
 <222> (27)..(31)
 <223> all n = c, g, a, t

<400> 6
mrctcgggtac cgttgatcct gtttcgnnnn nctcatcagt tgcattgggc cctatagtga
60

gtcgtatta
69

<210> 7
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> T3 15mer (T7 promoter)

<400> 7
aattaaccct cacta
15

<210> 8
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> P1 17mer (T7 promoter)

<400> 8
ctcgggtaccg ttgatcc
17

<210> 9
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> P2 38mer (T7 promoter)

<400> 9
gagggatcct aatacgactc actataggcc caatgcaa
38

<210> 10

<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> P3 40mer (T7 promoter)

<400> 10
gagggatcct aatacgactc actatagggc ccaatgcaac
40

<210> 11
<211> 17
<212> RNA
<213> Artificial Sequence

<220>
<223> KrS17 (17mer substrate)

<400> 11
uugcgagucc acacugg
17

<210> 12
<211> 19
<212> RNA
<213> Artificial Sequence

<220>
<223> IL2S19 (19mer substrate)

<400> 12
aacuccuguc uugcauugc
19

<210> 13
<211> 15
<212> RNA
<213> Artificial Sequence

<220>
<223> IL2S15 (15mer substrate)

<400> 13
uccugucuug cauug

15

<210> 14
 <211> 34
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> KrMc10 (34mer miniribozyme)

 <400> 14
 uccagugugc ugaugaggua acgaaacucg caaa
 34

<210> 15
 <211> 42
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> KrRz (42mer ribozyme)

 <400> 15
 cuccagugug cugaugaguc cuuuuggacg aaacucgcaa at
 42

<210> 16
 <211> 34
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> IL2Mc10 (34mer miniribozyme)

 <400> 16
 gcaaugcaac ugaugaggua acgaaacagg agut
 34

<210> 17
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> IL2Rz (40mer ribozyme)

<400> 17

gcaaugcaac ugaugagucc uuuuggacga aacaggagut
40

<210> 18

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> PDGF293 MR1 (36-mer miniribozyme)

<400> 18

cagcuuccuc cugaugaggu aacgaaaugc uucuct
36

<210> 19

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> PDGF293 MR2 (36-mer miniribozyme)

<400> 19

cagcuuccuc cugaugaggt aacgaaaugc uucuct
36

<210> 20

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> PDGF293 MR3 (36-mer miniribozyme)

<400> 20

cagcttcctc cugaugaggt aacgaaaugc ttctct
36

<210> 21

<211> 36

<212> DNA
 <213> Artificial Sequence

<220>
 <223> PDGF293 MR4 (36-mer miniribozyme)

<400> 21
 cagcttcctc cugaugaggu aacgaaaugc uucuct
 36

<210> 22
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PDGF293 MR5 (36-mer miniribozyme)

<220>
 <221> modified_base
 <222> (19)..(19)
 <223> um

<220>
 <221> modified_base
 <222> (21)..(21)
 <223> fC= 2' fluorocytidine

<400> 22
 cagcuuccuc cugaugagua cgaaaugcuu cuct
 34

<210> 23
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PDGF293 MR6 (38-mer miniribozyme)

<220>
 <221> modified_base
 <222> (12)..(13)
 <223> ps=phosphorothioate linkage

<220>
<221> modified_base
<222> (1)..(1)
<223> cm

<220>
<221> modified_base
<222> (4)..(4)
<223> cm

<220>
<221> modified_base
<222> (7)..(8)
<223> cm

<220>
<221> modified_base
<222> (10)..(11)
<223> cm

<220>
<221> modified_base
<222> (30)..(30)
<223> cm

<220>
<221> modified_base
<222> (33)..(33)
<223> cm

<220>
<221> modified_base
<222> (35)..(35)
<223> cm

<220>
<221> modified_base
<222> (5)..(6)
<223> um

<220>
 <221> modified_base
 <222> (9)..(9)
 <223> um

<220>
 <221> modified_base
 <222> (15)..(15)
 <223> um

<220>
 <221> modified_base
 <222> (28)..(28)
 <223> um

<220>
 <221> modified_base
 <222> (31)..(32)
 <223> um

<220>
 <221> modified_base
 <222> (34)..(34)
 <223> um

<220>
 <221> modified_base
 <222> (36)..(37)
 <223> ps=phosphorothioate linkage

<220>
 <221> modified_base
 <222> (38)..(39)
 <223> ps=phosphorothioate linkage

<400> 23
 cagcuuccuc cugaugaggt aacgaaugc uucuctstst
 40

<210> 24
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> PDGF293 MR7 (28-mer miniribozyme)

<220>
<221> modified_base
<222> (1)..(2)
<223> um

<220>
<221> modified_base
<222> (5)..(5)
<223> um

<220>
<221> modified_base
<222> (11)..(11)
<223> um

<220>
<221> modified_base
<222> (24)..(24)
<223> um

<220>
<221> modified_base
<222> (28)..(28)
<223> um

<220>
<221> modified_base
<222> (3)..(4)
<223> cm

<220>
<221> modified_base
<222> (6)..(7)

<223> cm

<220>

<221> modified_base

<222> (26)..(26)

<223> cm

<220>

<221> modified_base

<222> (8)..(9)

<223> ps = phosphorothioate linkage

<400> 24

uuccuccuga ugaggtaacg aaaugcut
28

<210> 25

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> PDGF293-MR8 (32-mer miniribozyme)

<220>

<221> modified_base

<222> (2)..(2)

<223> cm

<220>

<221> modified_base

<222> (5)..(6)

<223> cm

<220>

<221> modified_base

<222> (8)..(9)

<223> cm

<220>

<221> modified_base

<222> (28)..(28)
<223> cm

<220>
<221> modified_base
<222> (31)..(31)
<223> cm

<220>
<221> modified_base
<222> (3)..(4)
<223> um

<220>
<221> modified_base
<222> (7)..(7)
<223> um

<220>
<221> modified_base
<222> (13)..(13)
<223> um

<220>
<221> modified_base
<222> (26)..(26)
<223> um

<220>
<221> modified_base
<222> (29)..(30)
<223> um

<220>
<221> modified_base
<222> (10)..(11)
<223> ps = phosphorothioate linkage

<400> 25
gcuuccuccu gaugaggtaa cgaaaugcuu ct

32

<210> 26
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> PDGF293 MR9 (36-mer miniribozyme)

<220>
<221> modified_base
<222> (1)..(1)
<223> cm

<220>
<221> modified_base
<222> (4)..(4)
<223> cm

<220>
<221> modified_base
<222> (7)..(8)
<223> cm

<220>
<221> modified_base
<222> (10)..(11)
<223> cm

<220>
<221> modified_base
<222> (30)..(30)
<223> cm

<220>
<221> modified_base
<222> (33)..(33)
<223> cm

<220>

<221> modified_base
<222> (35)..(35)
<223> cm

<220>
<221> modified_base
<222> (5)..(6)
<223> um

<220>
<221> modified_base
<222> (9)..(9)
<223> um

<220>
<221> modified_base
<222> (15)..(15)
<223> um

<220>
<221> modified_base
<222> (28)..(28)
<223> um

<220>
<221> modified_base
<222> (31)..(32)
<223> um

<220>
<221> modified_base
<222> (34)..(34)
<223> um

<220>
<221> modified_base
<222> (12)..(13)
<223> ps = phosphorothioate linkage

<400> 26

cagcuuccuc cugaugaggt aacgaaaugc uucuct...
36

<210> 27
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> PDGF293 MR10 (40-mer miniribozyme)

<220>
<221> modified_base
<222> (3)..(3)
<223> cm

<220>
<221> modified_base
<222> (6)..(6)
<223> cm

<220>
<221> modified_base
<222> (9)..(10)
<223> cm

<220>
<221> modified_base
<222> (12)..(13)
<223> cm

<220>
<221> modified_base
<222> (32)..(32)
<223> cm

<220>
<221> modified_base
<222> (37)..(37)
<223> cm

<220>
<221> modified_base
<222> (7)..(8)
<223> um

<220>
<221> modified_base
<222> (11)..(11)
<223> um

<220>
<221> modified_base
<222> (17)..(17)
<223> um

<220>
<221> modified_base
<222> (30)..(30)
<223> um

<220>
<221> modified_base
<222> (33)..(34)
<223> um

<220>
<221> modified_base
<222> (36)..(36)
<223> um

<220>
<221> modified_base
<222> (38)..(39)
<223> um

<220>
<221> modified_base
<222> (14)..(15)
<223> ps = phosphorothioate linkage

<400> 27
gacagcuucc uccugaugag gtaacgaaau gcuucucuuc
40

<210> 28
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> PDGF293 MR11 (44-mer miniribozyme)

<220>
<221> modified_base
<222> (5)..(5)
<223> cm

<220>
<221> modified_base
<222> (8)..(8)
<223> cm

<220>
<221> modified_base
<222> (11)..(12)
<223> cm

<220>
<221> modified_base
<222> (14)..(15)
<223> cm

<220>
<221> modified_base
<222> (34)..(34)
<223> cm

<220>
<221> modified_base
<222> (37)..(37)
<223> cm

<220>
<221> modified_base
<222> (39)..(39)
<223> cm

<220>
<221> modified_base
<222> (42)..(43)
<223> cm

<220>
<221> modified_base
<222> (9)..(10)
<223> um

<220>
<221> modified_base
<222> (13)..(13)
<223> um

<220>
<221> modified_base
<222> (19)..(19)
<223> um

<220>
<221> modified_base
<222> (32)..(32)
<223> um

<220>
<221> modified_base
<222> (35)..(36)
<223> um

<220>
<221> modified_base
<222> (38)..(38)
<223> um

<220>
 <221> modified_base
 <222> (40)..(41)
 <223> um

<220>
 <221> modified_base
 <222> (16)..(17)
 <223> ps = phosphorothioate linkage

<400> 28
 gggacagcuu ccuccugaug aggtaacgaa augcuucucu ucct
 44

<210> 29
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PDGF293 MR12 (36-mer miniribozyme)

<220>
 <221> modified_base
 <222> (1)..(1)
 <223> cm

<220>
 <221> modified_base
 <222> (4)..(4)
 <223> cm

<220>
 <221> modified_base
 <222> (7)..(8)
 <223> cm

<220>
 <221> modified_base
 <222> (10)..(11)
 <223> cm

<220>
<221> modified_base
<222> (23)..(23)
<223> cm

<220>
<221> modified_base
<222> (30)..(30)
<223> cm

<220>
<221> modified_base
<222> (33)..(33)
<223> cm

<220>
<221> modified_base
<222> (35)..(35)
<223> cm

<220>
<221> modified_base
<222> (5)..(6)
<223> um

<220>
<221> modified_base
<222> (9)..(9)
<223> um

<220>
<221> modified_base
<222> (15)..(15)
<223> um

<220>
<221> modified_base
<222> (20)..(20)
<223> um

<220>
 <221> modified_base
 <222> (28)..(28)
 <223> um

<220>
 <221> modified_base
 <222> (31)..(32)
 <223> um

<220>
 <221> modified_base
 <222> (34)..(34)
 <223> um

<220>
 <221> modified_base
 <222> (12)..(13)
 <223> ps = phosphorothioate linkage

<400> 29
 cagcuuccuc cugaugaggu aacgaaugc uucuct
 36

<210> 30
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PDGF293 MR13 (36-mer inactive miniribozyme)

<220>
 <221> modified_base
 <222> (1)..(1)
 <223> cm

<220>
 <221> modified_base
 <222> (4)..(4)

<223> cm

<220>

<221> modified_base

<222> (7)..(8)

<223> cm

<220>

<221> modified_base

<222> (10)..(11)

<223> cm

<220>

<221> modified_base

<222> (30)..(30)

<223> cm

<220>

<221> modified_base

<222> (33)..(33)

<223> cm

<220>

<221> modified_base

<222> (35)..(35)

<223> cm

<220>

<221> modified_base

<222> (5)..(6)

<223> um

<220>

<221> modified_base

<222> (9)..(9)

<223> um

<220>

<221> modified_base

<222> (15)..(15)

<223> um

<220>

<221> modified_base

<222> (28)..(28)

<223> um

<220>

<221> modified_base

<222> (31)..(32)

<223> um

<220>

<221> modified_base

<222> (34)..(34)

<223> um

<220>

<221> modified_base

<222> (12)..(13)

<223> ps = phosphorothioate

<400> 30

cagcuuccuc cugaugaggt aacgagaugc uucuct
36

<210> 31

<211> 25

<212> RNA

<213> Artificial Sequence

<220>

<223> PDGF S25

<400> 31

aggaagagaa gcaucgagga agcug
25

<210> 32

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> PDGF293 Antisense

<400> 32

agcttcctcg atgcttctc

19

<210> 33

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> N4g5-1 clone

<400> 33

ctgatgagtt atcgaaac

18

<210> 34

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> N4g5-2 clone

<400> 34

ctgatgaggt aacgaaac

18

<210> 35

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> N4g5-3 clone

<400> 35

ctgatgagac cccgaaac

18

<210> 36
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-4 clone

<400> 36
ctgatgagat aacgaaac
18

<210> 37
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-5 clone

<400> 37
ctgatgagac cccgaac
17

<210> 38
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-7 clone

<400> 38
ctgatgagac cccgaaac
18

<210> 39
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-9 clone

<400> 39
ctgatgagat accgaaac
18

<210> 40
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-11 clone

<400> 40
ctgatgagat accgaaac
18

<210> 41
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-13 clone

<400> 41
ctgatgagtt tccgaaac
18

<210> 42
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-14 clone

<400> 42
ctgatgagtt ttcgaaac
18

<210> 43
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-15 clone

<400> 43
ctgatgagtt accgaaac
18

<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-16 clone

<400> 44
ctgatgagac accgaaac
18

<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-17 clone

<400> 45
ctgatgagtt aacgaaac
18

<210> 46
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-18 clone

<400> 46
ctgatgagtt accgaaac
18

<210> 47
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-19 clone

<400> 47
ctgatgagac cccgaaac
18

<210> 48
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-21 clone

<400> 48
ctgatgagtt tacgaaac
18

<210> 49
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-23 clone

<400> 49
ctgatgagac cccgaaac
18

<210> 50
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-24 clone

<400> 50

ctgatgagtt accgaaac
18

<210> 51
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-26 clone

<400> 51
ctgatgagtt accgaaac
18

<210> 52
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-27 clone

<400> 52
ctgatgagac cccgaac
17

<210> 53
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-28 clone

<400> 53
ctgatgagtt atcgaaac
18

<210> 54
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-30 clone

<400> 54
ctgatgagtt tacgaaac
18

<210> 55
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-31 clone

<400> 55
ctgatgagtt tacgaaac
18

<210> 56
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N4g5-32 clone

<400> 56
ctgatgagac cccgaaac
18

<210> 57
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-2 clone

<400> 57
ctgatgagtc ctacgaaac
19

<210> 58

<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-7 clone

<400> 58
ctgatgagtc ccacgaaac
19

<210> 59
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-10 clone

<400> 59
ctgatgagaa tttcgaaac
19

<210> 60
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-11 clone

<400> 60
ctgatgagtc ccacgaaac
19

<210> 61
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-16 clone

<400> 61
ctgatgagtt aaacgaaac

19

<210> 62
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-19 clone

<400> 62
ctgatgagtc ccacgaaac
19

<210> 63
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-20 clone

<400> 63
ctgatgagtc ccccgaaac
19

<210> 64
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-21 clone

<400> 64
ctgatgagca ccccgaaac
19

<210> 65
<211> 19
<212> DNA
<213> Artificial Sequence

<220>

<223> N5g5-22 clone

<400> 65
ctgatgagtc ccacgaaac
19

<210> 66
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-25 clone

<400> 66
ctgatgagtg tcccgaaac
19

<210> 67
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-26 clone

<400> 67
ctgatgagtt ttacgaaac
19

<210> 68
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-27 clone

<400> 68
ctgatgagaa tttcgaac
18

<210> 69
<211> 19

<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-31 clone

<400> 69
ctgatgagtc ccacgaaac
19

<210> 70
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-32 clone

<400> 70
ctgatgagtg ttacgaaac
19

<210> 71
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-33 clone

<400> 71
ctgatgagtc ccacgaaac
19

<210> 72
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> N5g5-36 clone

<400> 72
ctgacgagtc ccacgaaac
19

<210> 73
 <211> 48
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> N18g0 Ribozyme

<220>
 <221> misc_feature
 <222> (13)..(30)
 <223> n = c, g, a, u

<400> 73
 ggcccaaugc aannnnnnnn nnnnnnnnnn aggaucaacg guaccgag
 48

<210> 74
 <211> 49
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> N4g0 Ribozyme

<220>
 <221> misc_feature
 <222> (22)..(25)
 <223> n = c, g, a, u

<400> 74
 gggcccaaug caacugauga gnnnncgaaa caggaucaac gguaccgag
 49